

from traditional forward-linking analysis of the parsed text. Iteration of this technique can further enhance the results.

The foregoing and additional features and advantages of the present invention will be more readily apparent from the following detailed description thereof, which proceeds with reference to the accompanying drawings.

Brief Description of the Drawings

Fig. 1 is a flow chart illustrating a method for generating a lexical knowledge base according to one embodiment of the present invention.

Fig. 2 is a logical form produced from a definition of the word "market" in accordance with one embodiment of the present invention.

Fig. 3 is a semantic relation structure corresponding to the logical form of Fig. 2.

Fig. 4 is an inverted semantic relation structure derived from the semantic relation structure of Fig. 3.

Fig. 5 is an illustration of an exemplary semantic network discussed in the specification.

Fig. 6 shows the semantic network of Fig. 5 with elaboration.

Fig. 7 is an illustration of another exemplary semantic network.

Fig. 8 is a structural diagram in accordance with one embodiment of the present invention.

Detailed Description

We now describe our use of DB methods to automatically create a semantic knowledge base from an on-line dictionary.

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Referring to Fig. 8, as is familiar to those skilled in the art, a personal computer 100 of the sort referenced above includes a central processing unit (CPU) 102 and a memory system 104 that communicate through a bus structure 106. CPU 102 includes an arithmetic logic unit (ALU) 108 for performing computations, registers 110 for temporary storage of data and instructions, and a control unit 112 for controlling operation of the computer in response to instructions from a computer program.

Memory system 104 generally includes high-speed main memory 114 in the form of a medium such as random access memory (RAM) and read only memory (ROM) semiconductor devices. Main memory 114 stores programs such as a computer's operating system and currently running application programs. Main memory 114 also includes video display memory for displaying images through a display device 116. Memory system 104 further generally includes secondary storage 122 in the form of floppy disks, hard disks, or CD-ROM storage for long term mass storage.

Personal computer 100 further typically includes one or more input devices 118 and output devices 116. These are usually peripheral devices connected by bus structure 106 to CPU 102. Input device 118 can be a keyboard, mouse, or

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other device for providing input data to the computer.
Output device 116 can be a display device, printer, or
other device for providing output data from the computer.--

Page 32, line 16, delete "implementations"

In the Claims:

Delete claims 1-15 without prejudice and add the following
new claims:

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16. A method for generating a lexical knowledge base in
a memory of a machine, comprising the steps:

(a) parsing a segment of text to obtain a logical form
corresponding thereto using a natural language parser associated
with said machine;

(b) using said machine to extract from the logical form a
complex semantic relation structure, the complex semantic
relation structure including at least a headword, a semantic
relation, and a value; the value of said complex semantic
relation structure including a primary value term, a lower level
relation, and a lower level value term;

(c) storing in the lexical knowledge base in said machine
memory the complex semantic relation structure in association
with the headword; and